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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/716,880	11/20/2000	Markku Lipponen	460-009934-US	1077
7590		07/27/2007		
Clarence A Green				
Peerman & Green LLP				
425 Post Road				
Fairfield, CT 06430				
			EXAMINER	
			TRINH, TAN H	
			ART UNIT	PAPER NUMBER
			2618	
			MAIL DATE	DELIVERY MODE
			07/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/716,880

Applicant(s)

LIPPONEN ET AL.

Examiner

TAN TRINH

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 11 is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-15 and 19-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the appeal brief filed on 04-02-2007, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution on 05-18-2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2618

3. Claims 1-2, 9, 15, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lueders (U.S. Patent No. 6067074).

Regarding claims 1, 9 and 15, Taylor teaches an electronic device (see fig. 1), a keyboard(see fig. 1, keyboard 20), comprising: a touch sensitive element (see fig. 2 and 3, sensitive touchpad 26, page 3, sections [0051-0052]), a keyboard plate fixed over the touch sensitive element (see fig. 2, keyboard plate (key-mat) 22 fixed over the sensitive touchpad 26), so that the depression of a key of the keyboard plate cause the key to sensing the signal to sensitive element essentially at a position on the touch sensitive element corresponding to the point of the key and mean correlating the position of touching on the sensitive element according to which key is depressed (see figs. 1-3, pages 2-3, sections [0038-0052]). But Taylor does not mention the depression of a key of the keyboard plate cause the key to touch the sensitive element essentially at a position on the touch sensitive element corresponding to the point of the key and mean correlating the position of touching on the sensitive element according to which key is depressed.

However, Lueders teaches the depression of a key of the keyboard (10) plate cause the key (28) to touch the sensitive element (91) essentially at a position on the touch sensitive element (91) corresponding to the point of the key and mean correlating the position of touching on the sensitive element according to which key is depressed (see fig. 3, col. 2, lines 10-66, and col. 3, lines 56-63, and col. 5, lines 3-18, and col. 7, lines 16-50). In this case, key switch 28 is depressed the switch pressure responsive so that the mechanically depressed on top and touch the sensitive element (91) (see fig. 3, the finger press the switch 28 cause all the elements in panel touching including the touch sensitive element (91)).

Art Unit: 2618

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify teaching of Taylor with Lueders, in order to improved keyboard with responsive keys and overlying flexible display membrane which is deformable so that when pressed and deformed, an underlying switch is activated (see suggested by Lueders on col. 8, lines 13-18).

Regarding claims 2 and 20, Taylor teaches an electronic device characterized in that the keyboard plate is a keyboard mat (see figs. 2-3, keyboard mat 22, page 2, section [0039-0040] and page, 3 section [0043]).

Regarding claim 22, Taylor teaches wherein the electronic device is provided with a position recognizing element for recognizing the position of the keyboard element (see figs. 6-8 and 11, pages 3-5, sections [0046-0081]).

4. Claims 4, 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lueders (U.S. Patent No. 6067074) further in view of Lee (U.S. Patent No. 6243595).

Regarding claims 4 and 10, Taylor or Lueders fails to teach wherein the keyboard is slidably mounted in the electronic device.

However, Lee teaches the keyboard is slidably mounted in the electronic device See figs. 1 and 2, the keyboard 7 is slidably mounted in the electronic device 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above combination of the teaching of Taylor and Lueders, with the teaching of Lee on the sliding keyboard in order to provide user with larger screen and easier to used of key pad.

Regarding claim 19, Taylor teaches wherein the electronic device is provided with a position recognizing element for recognizing the position of the keyboard element (see figs. 6-8 and 11, pages 3-5, sections [0046-0081]).

5. Claims 3, 6-8, 12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lueders (U.S. Patent No. 6067074) further in view of Riddiford (U.S. Patent No. 6587675).

Regarding claims 3 and 21, Taylor teaches wherein the keyboard plate is a rubber-like material which is able to deform (see page 2-3, sections [0039-0043]), and Lueders also teaches the keyboard plate is flexible membrane (see fig. 3, col. 8, lines 6-18). But Taylor or Lueders fails to teach the keyboard plate is a bubble membrane.

However, Riddiford inherently teaches the keyboard plate is a bubble membrane (see fig. 4, flexible membrane 22, and col. 3, lines 63-col. 4, line 8, since on depressing a key, is underside contacts the membrane surface on bubble membrane and connects two adjacent conductive area).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify above combination of the teaching off Taylor and Lueders with

Art Unit: 2618

the teaching of Riddiford on the membrane space surface technique in order to provide the array of keys which each has a conductive surface facing the membrane and spaced slightly away from the membrane when no key is depressed (see Riddiford col. 3, line 65-col. 4, line 1).

Regarding claims 6 and 12, Taylor teaches an electronic device (see fig. 1) which comprises at least one body housing element (see fig. 9, body housing 80). But Taylor or Lueders fails to teach a keyboard arranged as turning in relation to the body housing element.

However, Riddiford teaches a keyboard (see figs. 1-3, keyboard 12) arranged as turning in relation to the body housing element (see fig. 2-3, when the keyboard 12 is turning over the keyboard 5, col. 3, lines 34-col. 4, lines 53).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the above combination of Taylor and Lueders, and with the teaching of Riddiford on the turning keyboard in order to provide user with larger surface of full size keyboard.

Regarding claim 7, Riddiford teaches an electronic device (see fig. 1) wherein the keyboard turnable between a first and a second extreme position (see fig. 1 for first position and fig. 2, for second position), and in the first extreme position the keyboard is preferably placed over the body housing element so that the keyboard functions as protection for the display and the keyboard is at least partly invisible (see fig. 1), and in the second extreme position the keyboard is preferably so that the keyboard and the display are essentially entirely exposed (see figs. 1 and 2 or figs. 5 and 6, col. 4, lines 8-53).

Art Unit: 2618

Regarding claim 8, Riddiford teaches further comprising another display and a keyboard arranged activating one or more functions of the electronic device preferably when the keyboard is in the extreme position (see figs. 2 and 6, col.3, line 34-col. 4, lines 31).

6. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (U.S. Patent No. 20030025679) in view of Lueders (U.S. Patent No. 6067074) further in view of Lee (U.S. Patent No. 6243595) and further in view of Riddiford (U.S. Patent No. 6587675).

Regarding claim 13, Taylor or Lueders fails to teach wherein keyboard turns between first and second extreme position, and wherein the first extreme position the keyboard is preferably placed over the body housing so that the keyboard functions as protection for the display and the keyboard is at least partly invisible and in the second extreme position the keyboard element is preferably so that the keyboard and the display are essentially entirely exposed.

However, Riddiford teaches an electronic device (see fig. 1) wherein the keyboard which has a first and a second extreme position (see fig. 1 and 5 for first position, and fig. 2 and 6, for second position), and wherein the first extreme position the keyboard is preferably placed over the body housing so that the keyboard functions as protection for the display and the keyboard is at least partly invisible (see fig. 1 and 5), and in the second extreme position the keyboard element is preferably so that the keyboard and the display are essentially entirely exposed (see fig. 2 or fig. 6, col. 4, lines 8-53).

Art Unit: 2618

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the above combination of Taylor, Lueders and Lee with Riddiford in order to provide user with larger surface of full size keyboard.

Regarding claim 14, Riddiford teaches further comprising a second display and another keyboard for activating one or more functions of the electronic device preferably when the keyboard is in the first extreme position (see fig. 1, col.3, line 34-col. 4, lines 31). Since first display 3 on fig. 2 and second display 4 is on fig. 1 and keyboard for activating one or more functions for make a call and so on).

Allowable' Subject Matter

7. Claims 5 and 11 are allowed.

Reasons for allowance

8. The following is an examiner's statement of reasons for allowance:

Claims 5 and 11 are allowed with the same reasons set forth in the previous Office action (paper mailed on 3-16-2006).

Response to Arguments

9. Applicant's arguments with respect to claims 1-15 and 19-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Art Unit: 2618

10. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

*Hand-delivered responses should be brought to the Customer Service Window (now located at the **Randolph Building, 401 Dulany Street, Alexandria, VA 22314**).*

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Anderson, Matthew D., can be reached at (571) 272-4177.

The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

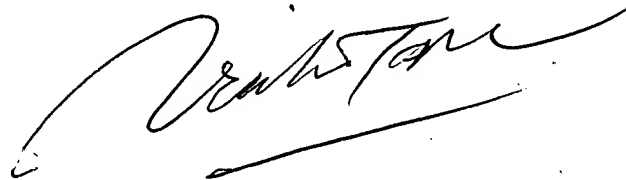
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

Art Unit: 2618

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Division 2618
July 20, 2007

PATENT EXAMINER
TRINH, TAN

A handwritten signature in black ink, appearing to read 'Tan H. Trinh', is written over a horizontal line.